16 May, 2002

Before the Federal Communications Commission

RE: Petition for Rulemaking, RM-10412

To the Commissioners and Other Concerned Parties:

I strongly urge that RM-10413 be rejected, which if adopted would require new equipment manufactured and offered for sale for use in the Amateur Radio Service, to be "field-repairable." On several accounts, I believe this would be excessively burdensome and ultimately ineffectual.

While the aim of ensuring the viability and survival of Amateur emergency communications is a legitimate and necessary one, now more than ever before, mandating that amateur radio equipment manufacturers use field-repairability as a central design criterion will do little to achieve this end.

In the event of large scale disaster, one must assume that access to replacement parts, circuit boards, test equipment, and tools would become limited, in the extreme. That a radio transceiver or other equipment is easily repaired using minimal, simple hand tools is a moot point if the necessary replacement component(s) is not at hand.

Thus, unless the further requirement is added that manufacturers and retailers supply a complete set of replacement parts for the components that are most critical and/or most likely to fail with each new radio sold, and that licensed Amateur operators keep these items with the radio at all times (along with the tools needed to perform replacement of failed components, and other necessary repairs), this Petition could not ensure any higher degree of the disaster readiness of Amateur radio emergency communications than already exists

Providing such a set of parts would also be very expensive and cumbersome, putting such so-called “field-repairable” transceivers out of reach of many A.R.S. licensees, which of course defeats the purpose of this Petition. Further, adoption of RM-10412 could very well drive manufacturers out of the Amateur equipment business altogether, which is a small niche electronics market which is tightly competitive and very price sensitive. Today only three major full-line manufacturers of Amateur radio equipment remain in a market that until the late 1960’s included a dozen, and scores of smaller and/or speciality companies. The Amateur Radio Service, and the public at large, would be ill served by a further narrowing of this industry.

Furthermore, mandating that Amateur radio transceivers, transmitters, receivers, and accesory equipment be field repairable, as defined by the author of RM-10412 is largely unneccessary due the excellent design and outstanding reliability of Amateur transceivers introduced during the last ten years or so. Today’s radios are smaller, lighter, consume less power, are more flexible and versatile in their operation, and are more often than not built to robust and rigorous US Military Specifications. They are safer, easier to operate, and capable of extremely good performance under conditions of weak signals and poor radio propagation, and they stand up well to the heavy use, high duty-cycles, and inclement weather that often characterize disaster

communications, and which are prepared for annually in the US during our "Field Day," which is held each June.

Microprocessors have indeed increased complexity, and surface mount technology (SMT) has meant that Amateurs who would repair, maintain, or modify their equipment must learn new diagnostic, assembly, and soldering techniques, but reliability has greatly improved, as failure rates of both complete radios and of individual components continues to plummet. The growing popularity of mobile, maritime, and outdoor (*e.g.* camping, hiking) operating has led, and continues to, the design and marketing of more and more rugged and weather-resistant Amateur equipment.

Lastly, the text of RM-10412 demands that amateur equipment be field repairable ". . .in some manner. . .", but goes no further in defining the how and what of field repairability. Obviously the Petition is poorly thought out, as literally all amateur radio equipment, including the latest and most complex models, are in fact "field repairable. . .in some manner" The petition is far to vague and broad as written and presented. Replacing a fuse can correctly be considered "field repair, as cand replacing a power supply electrolytic capacitor, an LED, a flourescent frequency display, final RF power transistors, or a series of SMT capacitors, resistors, and integrated circuits on a digital signal processor. What constitutes field repairability depends greatly on the skills, training, tools, and test equipment of the individual. Even if all other arguments against this Petition were moot, the authors would need to adequately and more narrowly define what is meant by "in some manner" before the measure could even have the appearance of acceptability.

To conclude, the mandate of "Field-repairable" Amateur Radio equipment, as proposed in RM-10412, is poorly defined, excessively burdensome to everyone concerned, from manufacturers to Amateur Radio licensees/users, difficult to implement, costly, and ultimately is not practicable and is a nearly entirely ineffectual solution to a problem that does not really exist in the first place.

Respectfully Submitted,

William C. White
Amateur Radio Service KD7BFX
8311 11th Avenue NW
Seattle WA 98117